

REMARKS

The rejections of Claim 1 as being anticipated by Tarr et al. under 35 USC §102(b), of Claim 1 as being anticipated by Anderson et al. under 35 USC §102(e), and of Claim 2 on grounds of obviousness-type double patenting are traversed. Reconsideration of each of these rejection is respectfully requested.

The Tara et al. patent is directed to a diesel engine injector where the injector pressure is an excess of 10 Mpa (see Fig. 2). In stark contrast, the present invention involves injector pressures at least an order of magnitude below that used in a diesel engine, in particular 0.1 to 1.0 Mpa (see page 46, line 24 to page 47, line 15). In other words, the Tarr et al. injector would not be useable in the engine of the present invention because the fuel penetration would be excessive, resulting in fuel adhering to the piston and cylinder wall.

Likewise, the Anderson et al patent does not teach where the 8-10 μm SMD is measured from. That is, it is unclear from the Anderson et al. patent what the particular diameter size is at a position 50 mm from the nozzle discharge orifice when injecting under atmospheric pressure. On the other hand, the defined particle size produced in the present invention provides the stratified rich air-fuel component around the plug without disturbance from the swirl or tumble flow in the remainder of the cylinder chamber.

Given the amendments to Claim 1, defining the position of particle size measurement, dependent Claim 2 cannot be deemed merely an obvious variant of the engine set forth in Claim 1 of U.S. Patent No. 6,732,706.

With regard to the new claims, support therefore is found at page 3, lines 8-13, and page 27, lines 4-13 of the Specification.

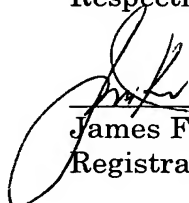
Accordingly, early and favorable action is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #056203.48603C2).

Respectfully submitted,

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